



Freight Transportation Profile—Iowa Freight Analysis Framework

Understanding future freight activity is important for matching infrastructure supply to demand and for assessing potential investment and operational strategies. To help decisionmakers identify areas in need of capacity improvements, the U.S. Department of Transportation developed the Freight Analysis Framework (FAF), a comprehensive national database and analysis tool that examines freight flows for the truck, rail, water, and air modes. FAF also forecasts freight activity in 2010 and 2020 for each of these modes. Information about the methodology used in developing FAF is available on the Office of Freight Management and Operations' website www.ops.fhwa.dot.gov/freight.

The U.S. freight transportation network moves a staggering volume of goods each year. Over 15 billion tons of goods, worth over \$9 trillion, were moved in 1998. The movement of bulk goods, such as grains, coal, and ores, still comprises a large share of the tonnage moved on the U.S. freight network. However, lighter and more valuable goods, such as computers and office equipment, now make up an increasing proportion of what is moved. FAF estimates that trucks carried about 71 percent of the total tonnage and 80 percent of the total value of U.S. shipments in 1998. By 2020, the U.S. transportation system is expected to handle about 23 billion tons of cargo valued at nearly \$30 trillion.

Iowa

Table 1 presents information on freight shipments that have either an origin or a destination in Iowa. As shown in the table, trucks moved a large percentage of the tonnage and value of shipments, followed by rail. Figures 1 and 2 show freight flows on the highway and rail modes.

Truck traffic is expected to grow throughout the state over the next 20 years. Much of the growth will occur in urban areas and on the Interstate highway system (Figures 3 and 4). Truck traffic moving to and from Iowa accounted for 21 percent of the average annual daily truck traffic (AADTT) on the FAF road network. Approximately 16 percent of truck traffic involved in-state shipments, and 40 percent involved trucks traveling across the state to other markets. Nearly 23 percent of the AADTT were not identified with a route-specific origin or destination.

Table 2 shows the top five commodity groups shipped to, from, and within Iowa by all modes. As expected, the top commodities by weight are farm products and nonmetallic minerals. By value, the top commodities are food or kindred products and farm products.

Table 1. Freight Shipments To, From, and Within Iowa: 1998, 2010, and 2020

IOWA	Tons (millions)			Value (billions \$)		
	1998	2010	2020	1998	2010	2020
State Total	416	570	680	204	375	586
By Mode						
Air	<1	<1	<1	8	20	34
Highway	318	435	518	177	322	500
Other ^a	<1	<1	<1	<1	<1	<1
Rail	80	105	124	17	28	45
Water	19	29	38	3	5	8
By Destination/Market						
Domestic	403	547	648	194	354	550
International	14	23	32	10	21	37

Note: Modal numbers may not add to totals due to rounding.

^a The "Other" category includes international shipments that moved via pipeline or by an unspecified mode.

Figure 1. Freight Flows To, From, and Within Iowa by Truck: 1998 (tons)



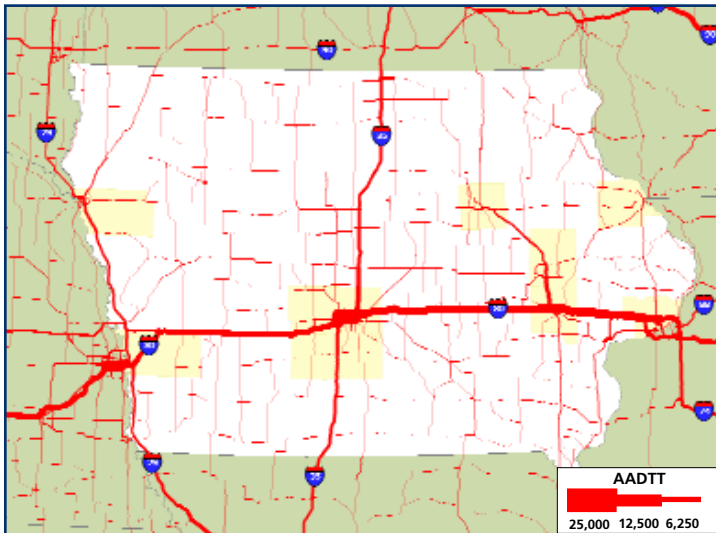
Federal Highway Administration

Figure 2. Freight Flows To, From, and Within Iowa by Rail: 1998 (tons)



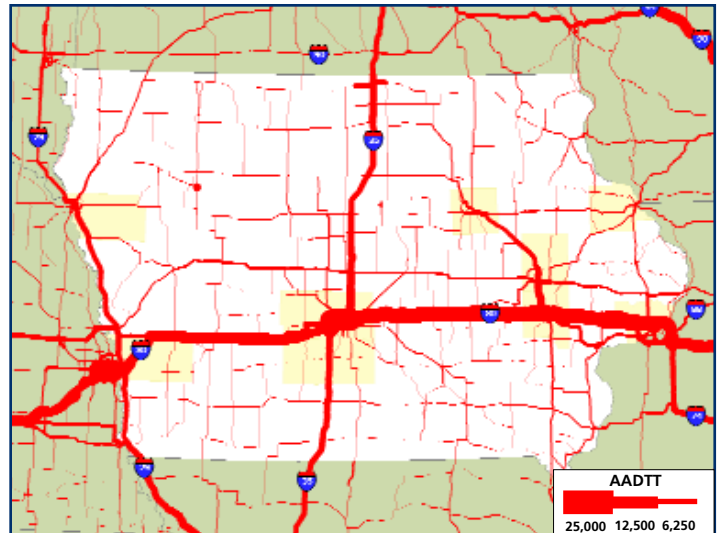
Federal Railroad Administration

Figure 3. Estimated Average Annual Daily Truck Traffic: 1998



Federal Highway Administration

Figure 4. Estimated Average Annual Daily Truck Traffic: 2020



Federal Highway Administration

Table 2. Top Five Commodities Shipped To, From, and Within Iowa by All Modes: 1998 and 2020

Commodity	Tons (millions)		Commodity	Value (billions \$)	
	1998	2020		1998	2020
Farm Products	114	152	Food/Kindred Products	55	183
Nonmetallic Minerals	108	153	Farm Products	39	64
Food/Kindred Products	65	133	Transportation Equipment	19	45
Coal	31	40	Machinery	17	55
Clay/Concrete/Glass/Stone	26	57	Chemicals/Allied Products	17	44

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A series of FAF products are available on the website noted below. FAF outputs include freight flow maps for states, modes, and gateways; detailed databases on traffic flows and commodity movements; information on the methodologies used to develop FAF; and forecast assumptions.

The U.S. Department of Transportation, Bureau of Transportation Statistics (BTS) is also developing a series of state transportation profiles. For more information and to obtain a copy of the BTS reports, please call 202-366-DATA.



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